## REMARKS/ARGUMENTS

This reply is responsive to the Office Action mailed on January 21, 2009. Reconsideration and allowance of the application and presently pending claims 1-4, 6-38, and 40-77 are respectfully requested.

Present Status of the Patent Application

Claims 1-4, 6-38, and 40-77 remain pending in the present application. Claims 1-73 have been rejected. Claims 5 and 39 have been cancelled without prejudice. Claims 74-77 have been added. The amendments to the claims were made to render them more clear and definite and to emphasize the patentable novelty thereof. There is no intent to surrender equivalence. No new search should be required.

Response to Claim Objections

Claims 1, 4, 28, 31, 62, and 65 have been objected to due to informalities, although it appears claim 4 should be replaced with claims 7 and 41. Applicant has modified these claims as recommended by the Examiner. Therefore, this claim objection should be withdrawn.

Response to Drawing Objections

The drawings (FIGS. 4, 5, 6.1, and 6.2) have been objected to because they allegedly are not of sufficient quality to permit examination. Applicant has previously submitted replacement drawing sheets for FIGS. 4, 5, 6.1, and 6.2. Therefore, this drawing objection should be withdrawn.

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Response to Specification Objections

The specification has been objected to due to informalities. Applicant has modified the specification to eliminate these informalities. Therefore, this specification objection should be withdrawn.

Response to Claim Rejections Under 35 U.S.C. §103

Claims 1-3, 5-31, 33, 35-65, 67, and 69-73 have been rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Eng (U.S. patent 5,963,557) in view of Grzeczkowski (U.S. patent application publication 2003/0143946). Applicants respectfully traverse this rejection.

Claims 4, 32, 38, and 66 have been rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Eng in view of Grzeczkowski and further in view of Albrow et al. (U.S. patent 6,038,213). Applicants respectfully traverse this rejection.

Claims 34 and 68 have been rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Eng in view of Grzeczkowski and further in view of Dorenbosch et al. (U.S. patent 6,023,230). Applicants respectfully traverse this rejection.

The Eng patent discloses a method and system for enabling point-to-point and multicast communication in a network using three types of communication channels, namely, one or more upstream payload channels, one or more upstream control channels, and one or more downstream channels. Eng's device provides LAN-like communication capability on a cable network for a relatively small number of customers, several hundred, which is appropriate for a LAN function. The Eng device utilizes contention detection where the headend detects a collision in a slot and then schedules a downstream notification that the particular slot suffered a contention, which triggers the downstream devices to re-send the requests that were sent in that slot. This type of contention detection at the headend plus the holding of a request at the

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headend until an assignment is made and scheduling delay, all increase the latency of the transmissions. While a specific transmission latency is not discussed in Eng, it may be the case under certain circumstances that the combined impact of these factors gives a latency of an undesirable period of time such as over 200 msec. Although Eng does not specify the type of data being transmitted, this amount of latency would be consistent with the transmission of non-time sensitive data, not for voice or video services.

The Grzeczkowski patent discloses a method and apparatus to configure, provision, and control a set-top terminal using a wireless web appliance, where a wireless communication path is established between the wireless web appliance and the set-top terminal. The set-top terminal is coupled to a cable network that provides data and control signal transport between the set-top terminal and a headend. The wireless web appliance is intended for use at the customer's premise where a technician or homeowner uses the appliance to reconfigure or troubleshoot the set-top terminal or in a warehouse environment where the set-top boxes are being set-up in preparation for delivery.

The Albrow patent discloses a method of restricting channel access depending on subscriber classes and system loading. Albrow's method utilizes a wireless network for digital telephones that sets up telephone circuits for minutes at a time. The Albrow method is appropriate for a telephone network with fewer than 1000 customers and particularly appropriate for an emergency response network.

The Dorenbosch patent discloses a method and apparatus for effecting channel acquisition by providing a structure for allowing pagers to reconfigure there scan frequencies to facilitate movement from the area of one pager headend to another pager headend to minimize scanning for the control frequency and to preserve battery

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life. The method requires a movement schedule received from a subscriber to let the system know of any location changes of the subscriber.

However, the present invention provides a system and method for scalable multifunctional network communication between presentation devices and services providers. The system and method provide communication such as wireless communication or other forms of communication, capable of providing all services, due to its small transmission delays, to a huge number of subscribers such as millions of subscribers. The method requires only a single channel, but a preferred embodiment includes both an uplink channel and a downlink channel. The claimed invention does not depend on collision detection as described in Eng. In the claimed invention requests are re-distributed by the headend control computer via the request queue update message (RQUM) back to the CPE units. Therefore, the requesting CPE unit or units can note the absence of its or their own request in the RQUM and can re-send the absent request or requests. In this manner, control is distributed from the headend control computer out to the CPE units. The present invention may be implemented at a very low cost to both the operator and the consumer so that broadband access can be offered to both remotely located and low income people.

In the claimed invention delays due to latency are greatly and significantly reduced compared a contention detection system, such as used in Eng. Instead, in the inventive system, when contentions arise at the headend by competing requests sent from two or more CPE units, one or more of the competing requests will be lost. Then when the headend control computer re-sends the requests via the RQUM, the missing lost requests are detected by the CPE units which previously sent them. This is then a sign for the CPE unit to re-send the absent request.

However, the combination of the Eng and Grzeczkowski patents does not disclose such a system and method of providing scalable multifunctional network

communication. Additionally, the Eng patent specifically teaches away from a system or method utilizing only one or two channels. The present inventive system can function utilizing only one or two channels, as well as three or more, if desired.

*Independent Claim 1*

Independent claim 1, as amended, is allowable for at least the reason that Eng and Grzeczkowski do not disclose, teach, or suggest any of the following:

1) receiving at a headend control computer via an uplink channel upstream messages from the CPE units and sending from the headend control computer, via a downlink channel downstream messages to the CPE units,

2) collecting received requests for transmission time intervals on the uplink channel in a database and arranging at least some requests from the database in a request queue update message at the headend control computer,

3) sending the request queue update message via the downlink channel to at least some of the CPE units and processing the request queue update message to update a master request queue in the headend control computer and in the same manner to update master queues used at the CPE units to place the requests from the request queue update message in the request queues at the CPE units

4) detecting absent requests in the request queue update message by CPE units

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1) "*receiving at a headend control computer via an uplink channel upstream messages from the CPE units and sending from the headend control computer, via a downlink channel downstream messages to the CPE units*"

The Eng patent discloses a communication system use three channels, one for downstream service and control data, one for upstream service data, and one for upstream control data. In Eng the upstream control data is transmitted on a special uplink control channel in a noisy part of the cable spectrum. This feature is the advantageous portion of the Eng method. However, Eng clearly **teaches away** from using a single uplink channel by requiring separate uplink channels for service data and control data. Grzeckowski does not teach or suggest any channelization of his system.

2) "*collecting received requests for transmission time intervals on the uplink channel in a database and arranging at least some requests from the database in a request queue update message at the headend control computer*"

Neither Eng nor Grzeczkowski discloses arranging request signals received into a request queue update message. The Eng method merely discloses at col. 4, lines 50-55 the following:

> The head end 12 receives the reservation request control packets from the mini-slots and responds by assigning one or more slots to each requesting SS 50. The head end 12 then writes control packets into slots of the downstream channel DC indicating which slots are assigned to each SS 50.

Eng obviously does not teach or suggest such a request queue update message. Likewise, Grzeckowski does not teach or suggest any such message.

3) "*sending the request queue update message via the downlink channel to at least some of the CPE units and processing the request queue update message to update*"

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*a master request queue in the headend control computer and in the same manner to update master queues used at the CPE units to place the requests from the request queue update message in the request queues at the CPE units"*

Neither Eng nor Grzeczkowski disclose sending a request queue update message. As discussed above, the Eng method merely sends downstream "control packets ... indicating which slots are assigned" in response to the requests. This is not very flexible, since the Eng technique does not allow for the assignment to change if there are other message transmission needs after sending the assignment but before the message is sent. Grzeczkowski does not teach or suggest the sending of any such message.

*4) "detecting absent requests in the request queue update message by CPE units"*

Eng merely discloses a typical contention/collision detection method at the headend, that does not include distributing such control to the CPE units by use of a request queue update message. Likewise, Grzeckowski does not teach or suggest the detection of absent messages by CPE units.

Accordingly, the rejection is deficient in at least these areas. Notwithstanding, the undersigned has reviewed the entirety of the Eng and Grzeczkowski patents and has failed to identify any such teachings anywhere within these references. Accordingly, the Eng and Grzeczkowski patents fail to teach or disclose the invention as defined by claim 1, and the rejection of claim 1 should be withdrawn.

*Independent Claim 35*

Independent claim 35, as amended, is allowable for at least the reasons described above regarding claim 1. Therefore, the rejection of claim 35 should be withdrawn.

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*Independent Claim 69*

Independent claim 69, as amended, is allowable for at least the reasons described above regarding claim 1. Therefore, the rejection of claim 69 should be withdrawn.

*Independent Claim 73*

Independent claim 73, as amended, is allowable for at least the reasons described above regarding claim 1. Therefore, the rejection of claim 73 should be withdrawn.

*New claims*

New claims 74-77 depend from allowable independent claim 1; 35; 69; and 73, respectively, and should be allowable for the reasons described above.

*Dependent Claims*

Dependent claims 2-4, 6-34 & 74; 36-38, 40-68 & 75; 70-72 & 76; and 77 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 1; 35; 69; and 73, respectively. *In re Fine,* 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

## CONCLUSION

The other cited art of record has been reviewed, and it is believed that the claims, as amended, patentably distinguish thereover.

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In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and rejections have been traversed, rendered moot, and/or accommodated, and that now pending claims 1-4, 6-38, and 40-77 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned at 619-209-3063.
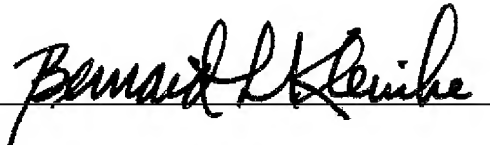
Please direct all correspondence to the undersigned attorney at the address indicated below.

Respectfully submitted,

Date: April 21, 2009

By: _____

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